ABSTRACT

A heavy duty wheeled vehicle for an industrial environment is electrically driven by one or more switched reluctance motor traction drive system connected to the wheels. The switched reluctance motors are powered by an electrical generator that is driven by an engine, such as a diesel engine, which may run at a substantially constant RPM. A digital control system provides operator displays and controls power conversion from the generator, as well as providing maintenance and control functions for the switched reluctance motors. A heavy-duty hoisting apparatus electrically drives a hoisting mechanism using an SR motor, providing power for lifting a load. The heavy-duty hoisting apparatus may include an engine and generator or provide power to the SR motor from an external source.